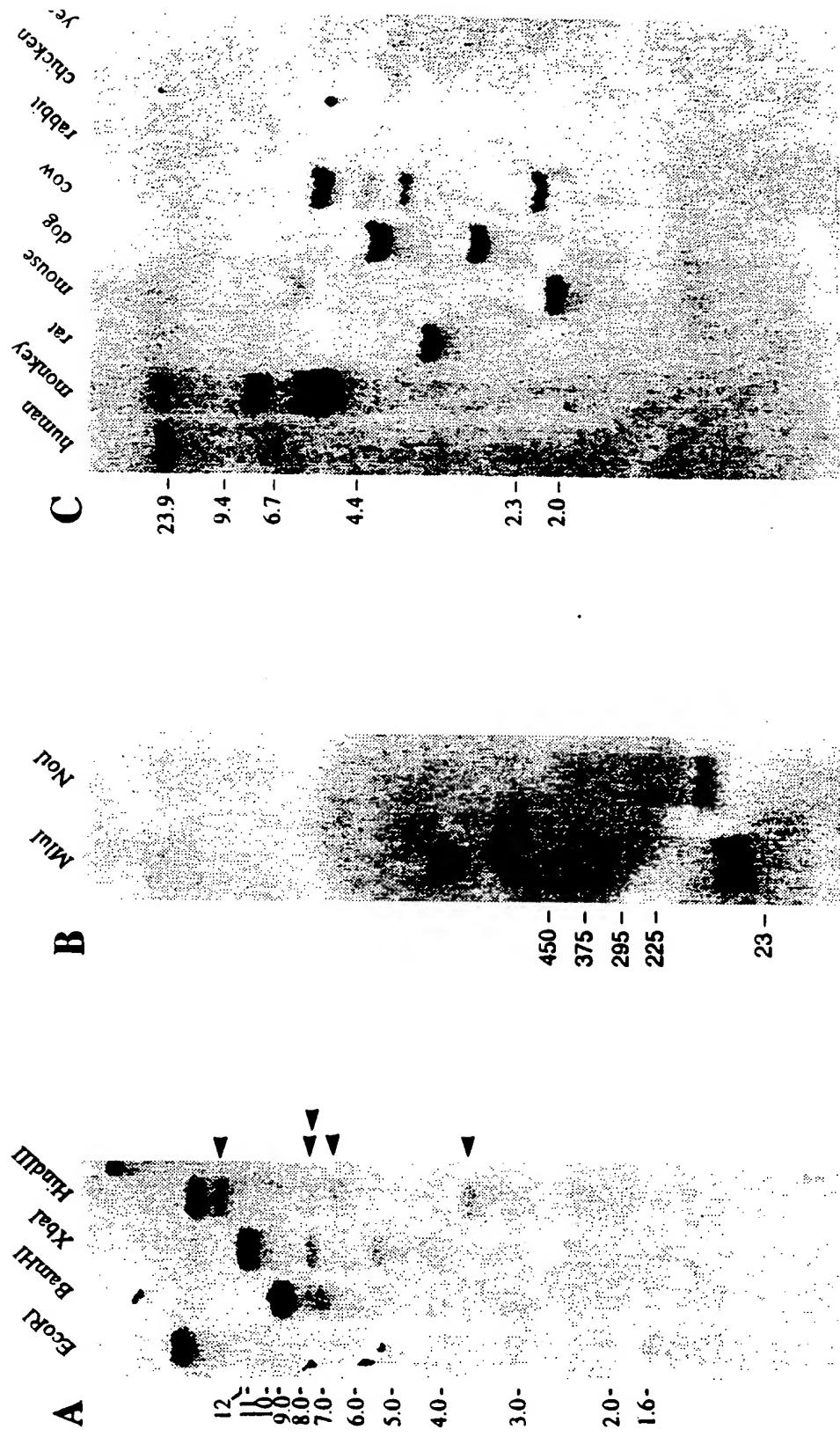
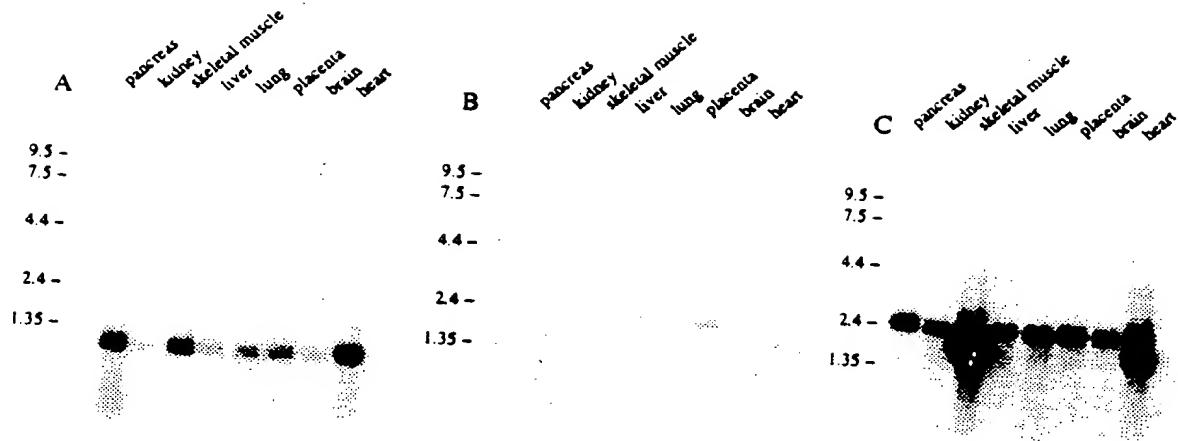


**Figure 1**

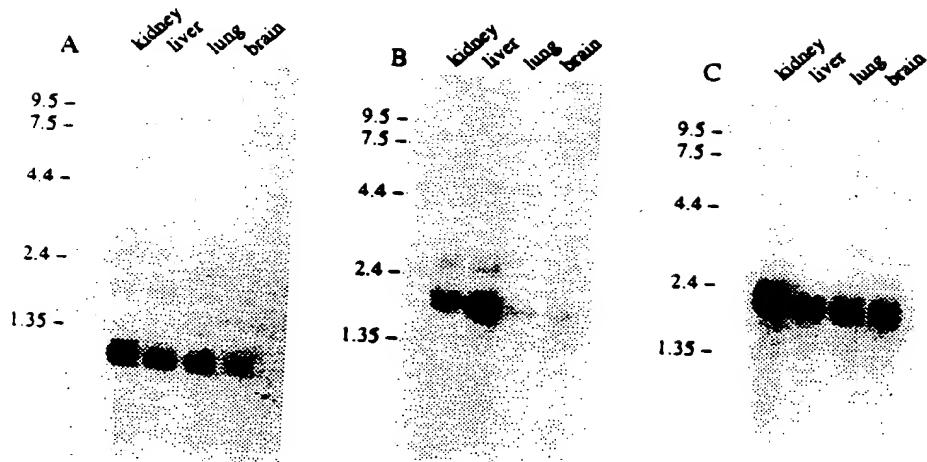
Figure 2



## Adult Tissues



## Fetal Tissues



**Figure 3**

**A**

10 20 30 40

MGAPTLPPAW QPFLKDRHIS TFKNWPFLG CACTPERMAE 40  
 AGFIHCPTEN EPDLAOCFFC FKELEGWEPD DOPIEEHKKH 80  
 SSGCAFLSVK KOFEEETLGE FLKLDRERAK NKAETNNK 120  
 KKEFEETAKK YRRATEOLAA MD 142

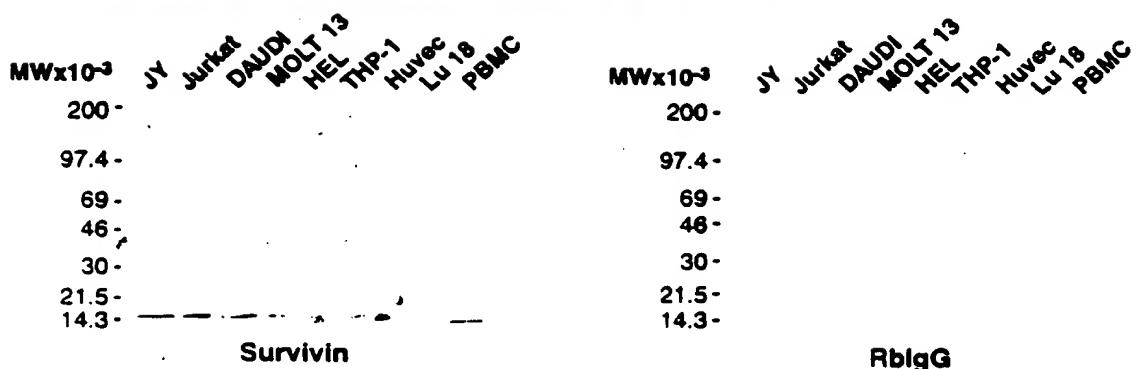
**B**

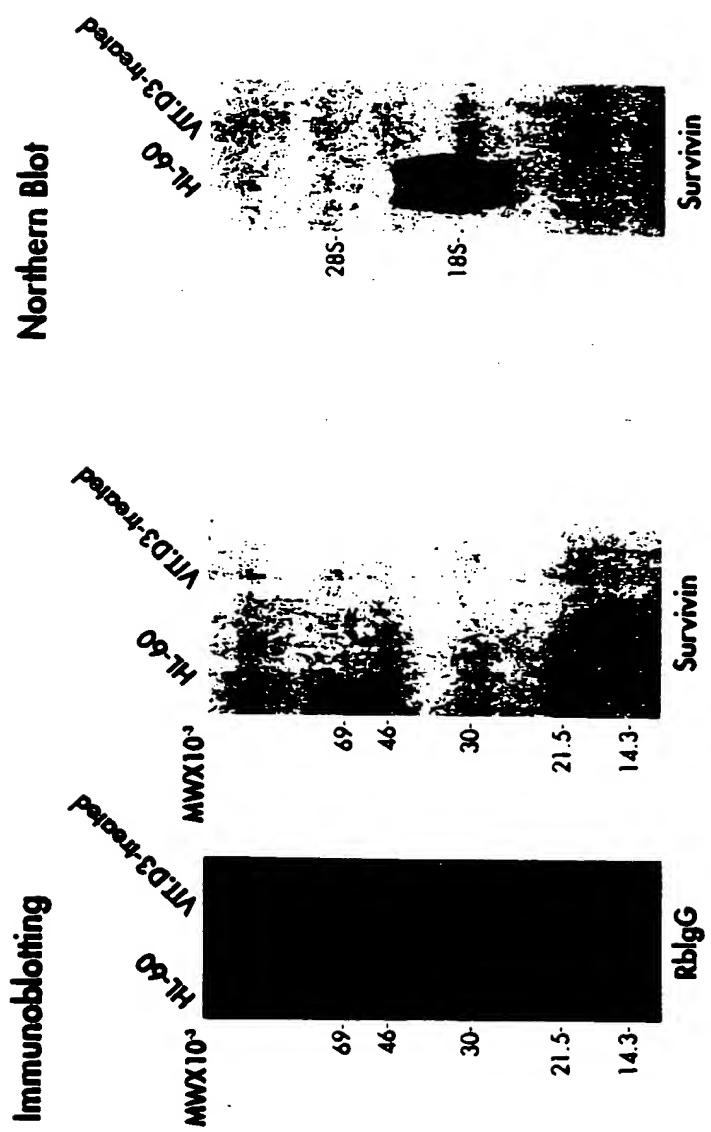
SEARLVTFQHWPD-APL---TPQSLAKAGFYYLGRGDDQVQCFACOGKLA Majority

|     | 210                           | 220                          | 230 | 240 | 250                     |
|-----|-------------------------------|------------------------------|-----|-----|-------------------------|
| 177 | FLTYSMMPD-LSPW                | SPAEQARAEKTYLDDGDDPAPDAGKES  |     |     | L49433.PRO SEQ 10 AND 7 |
| 113 | ANVVT KDKLW-PHI               | KPOADAKAKTYLRLHKKVWNVIVIA    |     |     | L49441.PRO 10           |
| 7   | V-----TKEKTV-SPL              | SPETNAEPEKTYLDDGDDPAPDAGKES  |     |     | P41436.PRO 6            |
| 18  | KAK-----GTYTHS-TV-QPL         | EPSPRMAASQTYLDDGDDPAPDAGKES  |     |     | P41437.PRO 12           |
| 159 | -----PPTWGGTSPCW              | -----                        |     |     | U19251.PRO 13           |
| 113 | ANVVT KDKDPMW-PNI             | TPQDAAKAGKTYLRLHKKVWNVIVIA   |     |     | U32373.PRO 10           |
| 163 | -----QKMPDVKHHL               | TPRPAKAGKTYLDDGDDPAPDAGKES   |     |     | U32974.PRO 15           |
| 163 | -----QKMPDVKHHL               | TPRPAKAGKTYLDDGDDPAPDAGKES   |     |     | U36842.PRO 14           |
| 169 | -----TQHMP-LTFL               | SPTDQARHGGYIIPGDRPACAGGKES   |     |     | U45878.PRO 11           |
| 184 | -----TYHHMP-LTFL              | SPGSEHAKAGKTYLDDGDDPAPDAGKES |     |     | U45879.PRO 12           |
| 163 | -----QKMPDVKHHL               | TPRPAKAGKTYLDDGDDPAPDAGKES   |     |     | U45880.PRO 13           |
| 113 | ANVVT KDKDPMW-PNI             | TPQDAAKAGKTYLRLHKKVWNVIVIA   |     |     | U45881.PRO 14           |
| 15  | KDHEISKEKHWRF-LSPW-CACTPERMAE | -----R-----                  |     |     | SURVIVIN.PRO            |

YVGIGDKVKCPHCDGGLRDWEPGDDPWSEHAKNFPRCSEPLLAKGQEVVS Majority SEQ 10 AND 21

|     | 360           | 370                                      | 380 | 390 | 400                      |
|-----|---------------|--|-----|-----|--------------------------|
| 290 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | L49433.PRO SEQ 10 AND 22 |
| 240 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | L49441.PRO 23            |
| 136 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | P41436.PRO 24            |
| 139 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | P41437.PRO 25            |
| 106 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U19251.PRO 26            |
| 240 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U32373.PRO 27            |
| 291 | ALBDDPKK----- | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U32974.PRO 28            |
| 290 | ALBDDPKK----- | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U36842.PRO 29            |
| 283 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U45878.PRO 30            |
| 297 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U45879.PRO 31            |
| 291 | ALBDDPKK----- | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U45880.PRO 32            |
| 240 | YDVRNDDKVCKC  | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | U45881.PRO 33            |
| 53  | -----         | EDGGGRNCWKPEDDPMWSEHAKNFPRCSEPLLAKGQEVVS |     |     | SURVIVIN.PRO             |

**C****Figure 4**



**Figure 5**

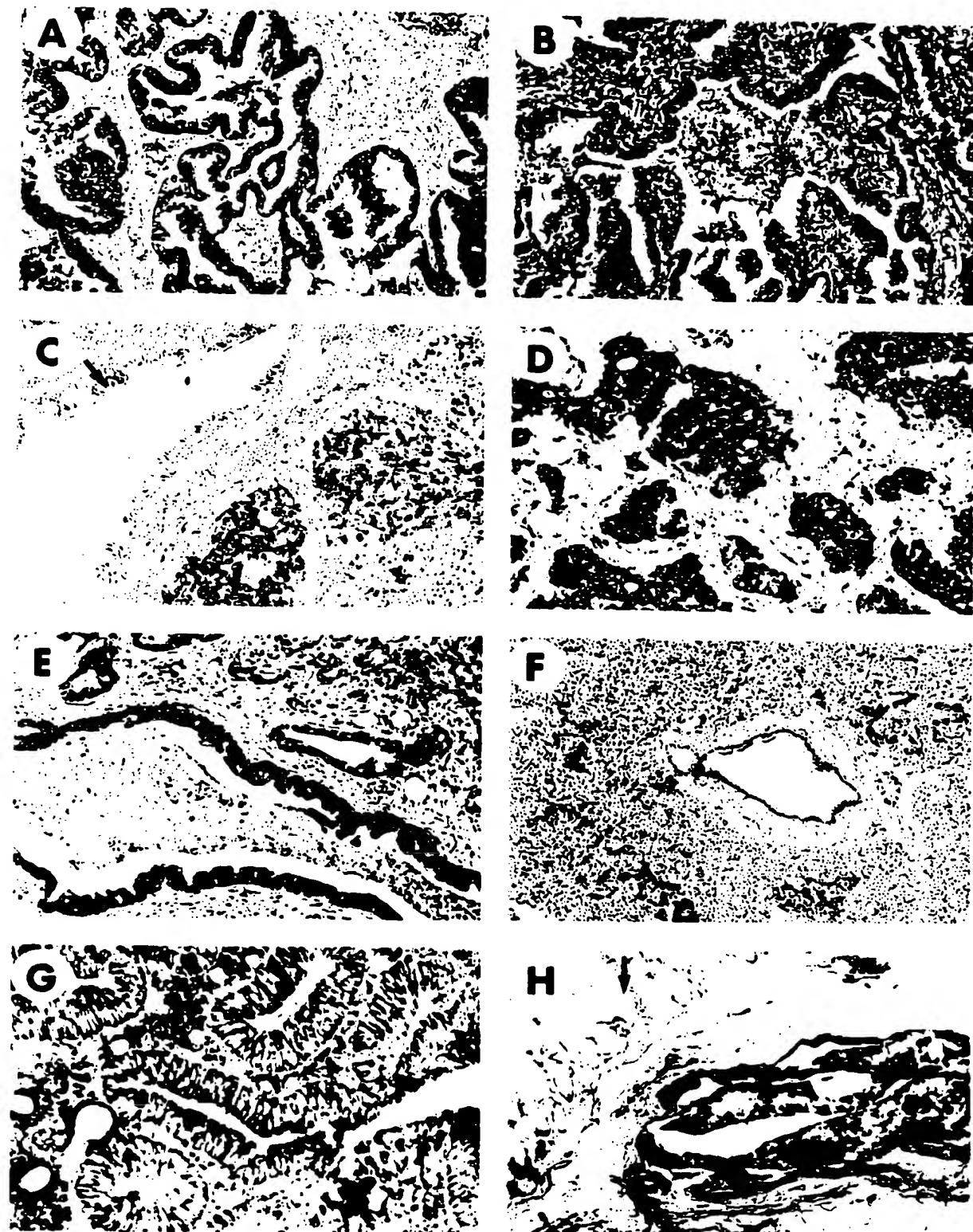
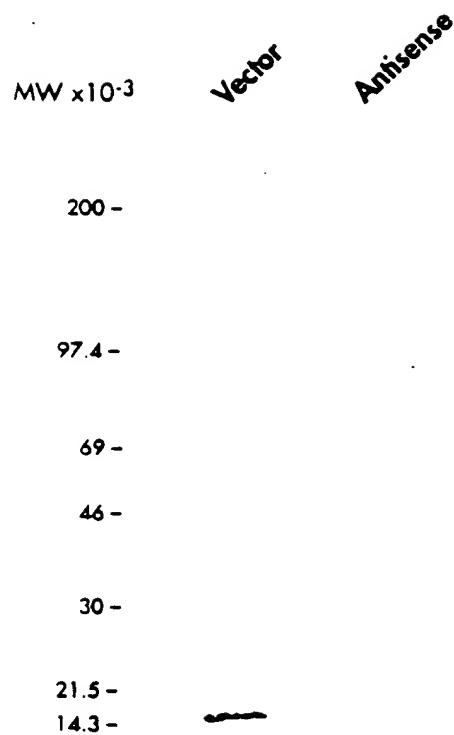
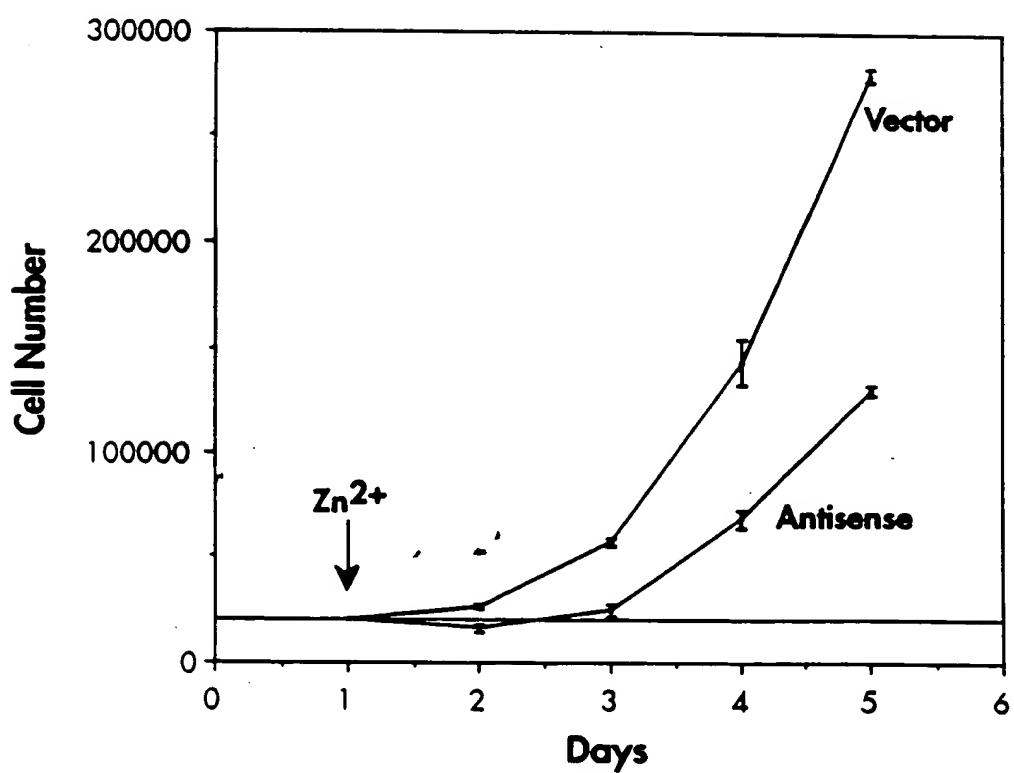


Figure 6

**Figure 7A**

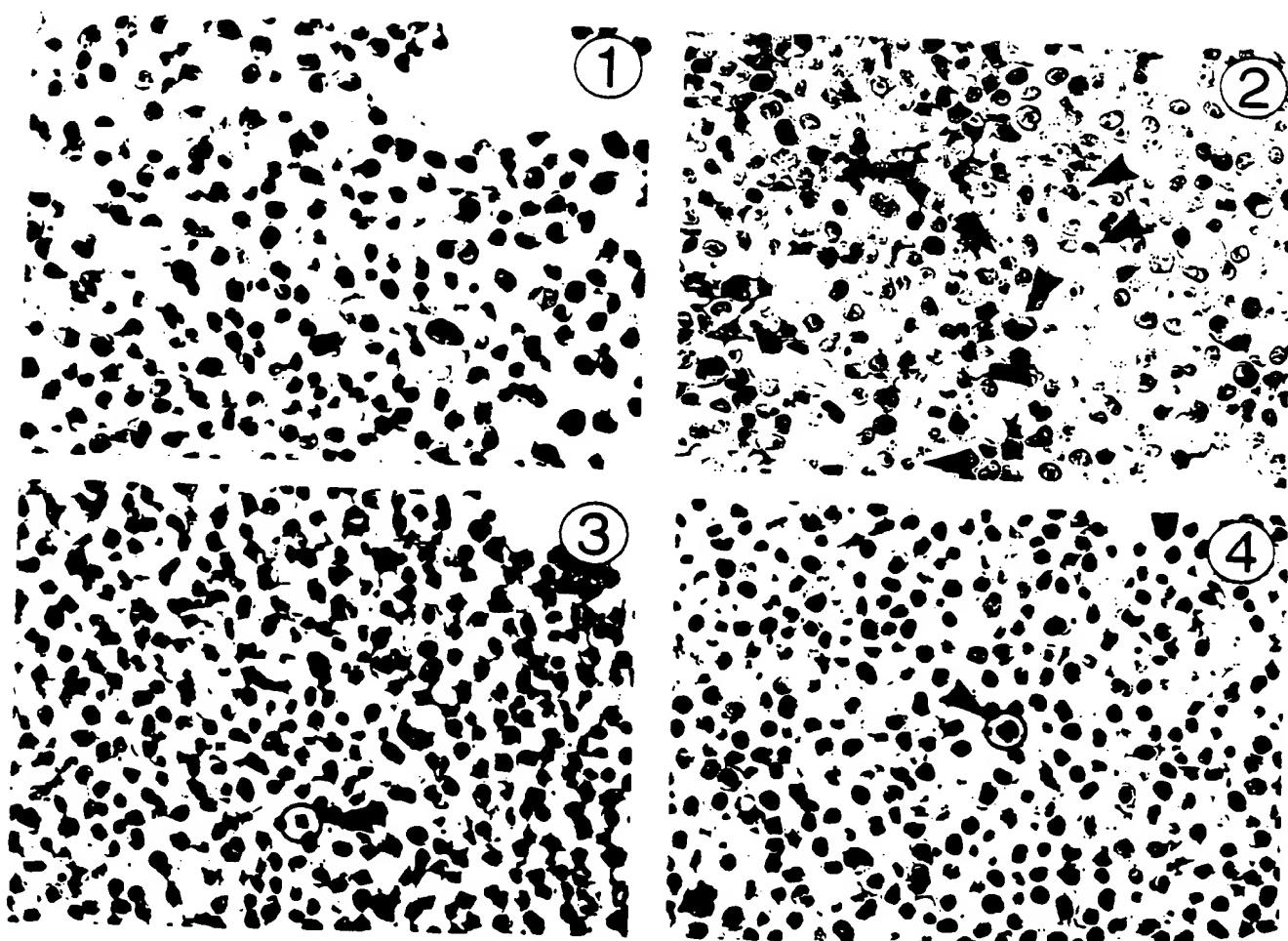


**Figure 7C**



**Figure 7B**

0000000000 = 404900



# Terminal Differentiation of HL-60 Cells Down Regulates Survivin and Increases EPR-1 Expression

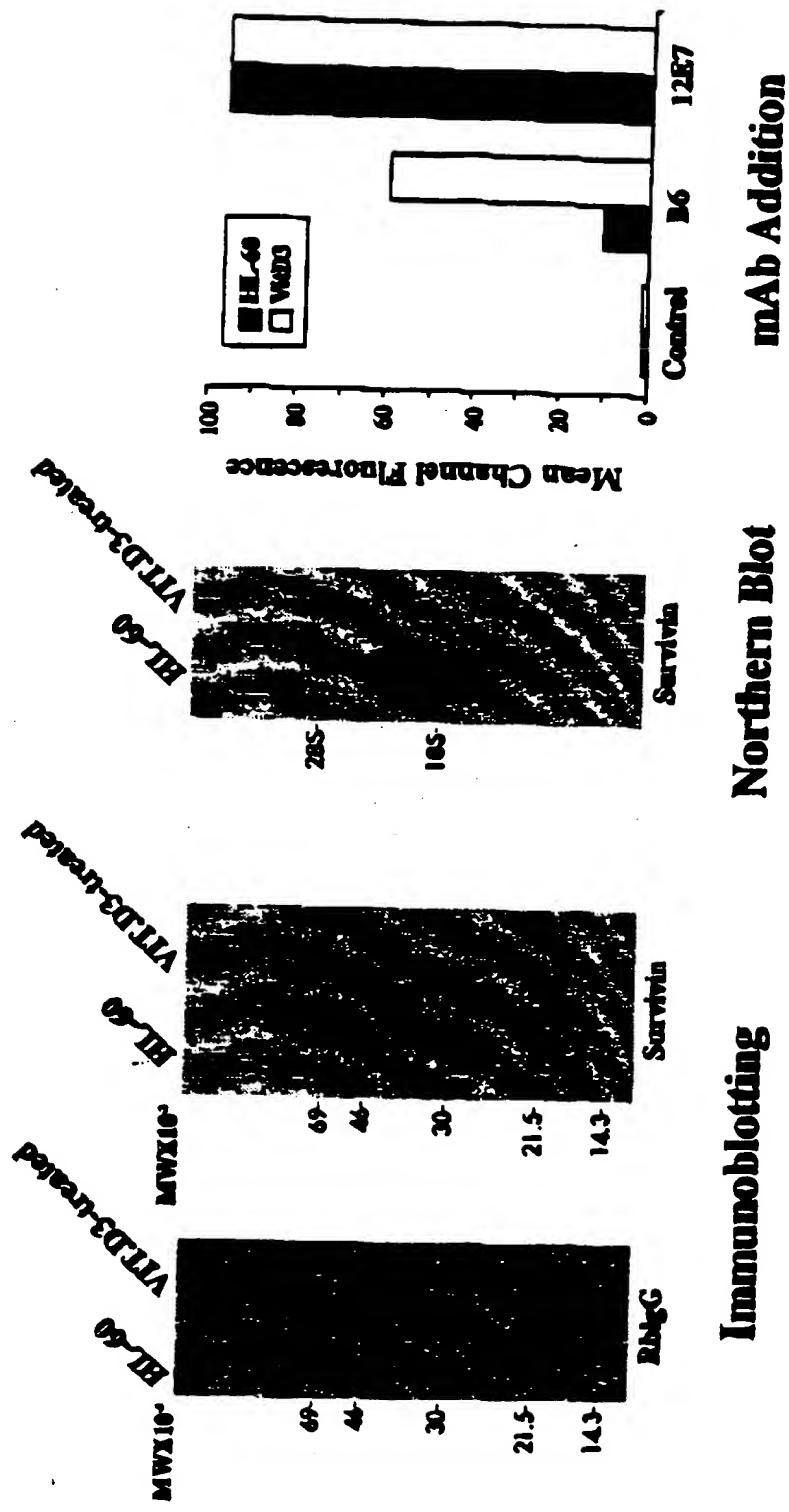


Figure 8

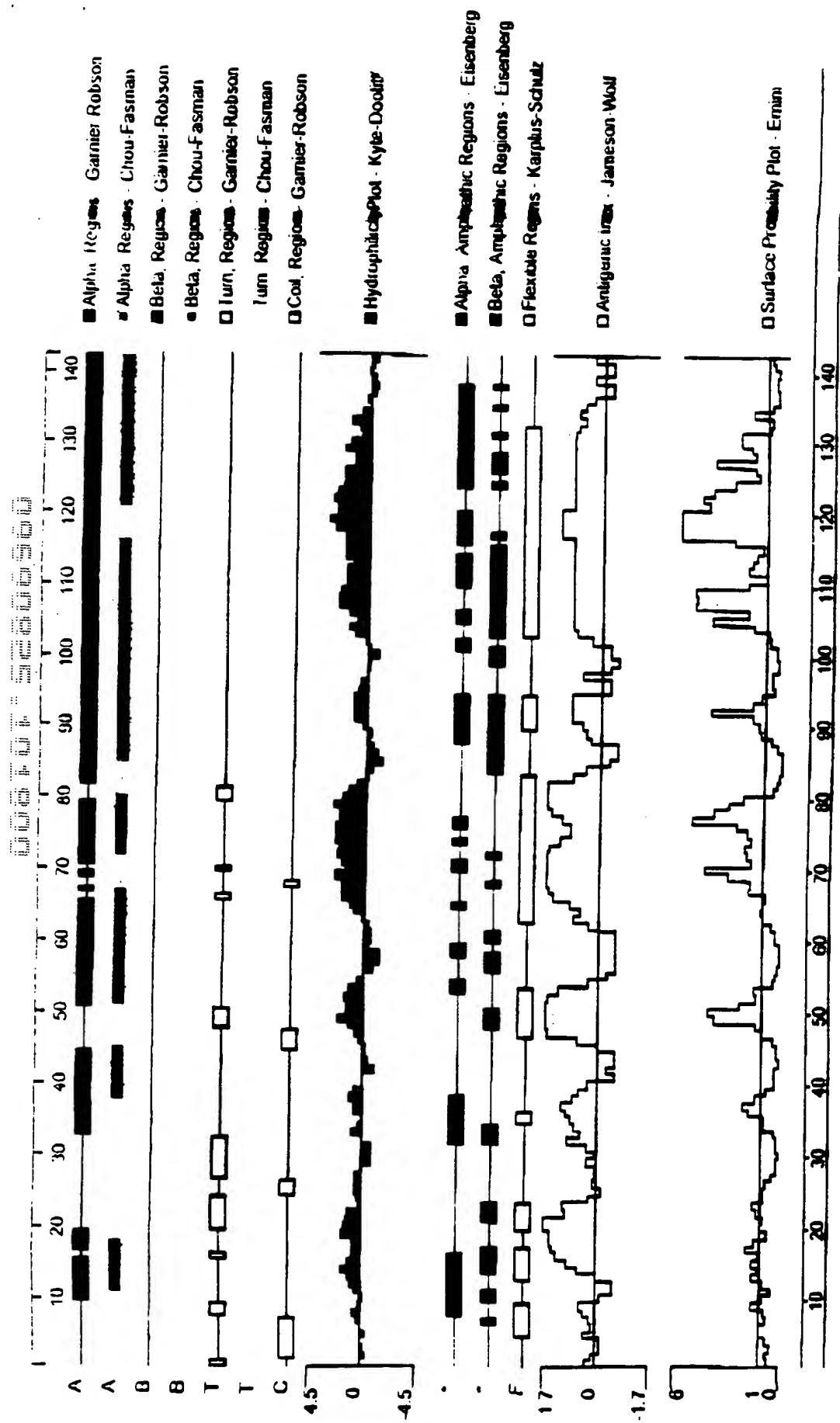


Figure 9

CDS=join(2811..2921,3174..3283,5158..5275,11955..12044)

translation=MGAPTLPPAWQPFLKDHRISTFKNWPFLEGACTPERMAEAGFIHCP  
TENEFDLAQCFFCFKELEGWEPDDDPIEEHKKHSSGCAFLSVKKQFEELTLGEFL  
KLDRERAKNKIAKETNNKKFEETAKKVRRAIEQLAAMD SE 2.1.2. NO. 34

**Figure 10**  
**(1 of 6)**

2341 cgattctcct gcctcagcct cccgagtagt tgggattaca ggcattgcacc accacgccc  
 2401 gctaaatttt gttttttttt tagagacaag gtttttccgt gatggccagg ctggcttga  
 2461 actccaggac tcaagtgtatg ctccctgcctt ggcctctcaa agtgttggga ttacaggcgt  
 2521 gagccactgc accccggcctg cacgcgttctt ttgaaagcag tcgagggggc gctagggtgt  
 2581 ggcaggggacg agctggcgcg gctgcgttgg gtgcacccgc accacgggca gagccacgct  
 2641 gccccggggac tacaactccc ggcacacccc gcccggcccc gccctactc ccagaaggcc  
 2701 gccccgggggtt gaccgcctaa gagggcgtgc gctcccgaca tgccccgcgg cgcgccttta → , fort  
 2761 accgccttccat ttgaaatcgcg ggacccgttgc gcaagggtgg cggccggcggc atgggtggcc  
 2821 cgacgttgc cccctgccttgc cagcccttc tcaaggacca ccgcattctt acattcaaga  
 2881 actggccctt ttggaggggc tgcgcctgca ccccgagcg ggtgagactg cccggccctt  
 2941 tgggggtcccc cacgcggccctt tgcgccttgc cctagcgagg ccactgtgac tggcccttgc  
 3001 gggtaacaagc cgcctcccccc tcccccgttgc gtcggccatg aggccactgt ggcgtggcc  
 3061 ttgggttcca ggccggccctt cccctcccttgc ttgtccccca tgcggccctt ttgggttgg  
 3121 cctcgggggtt cccggcccttgc acgtccactc acgagctgtg ctgccttgc cagatggcc  
 3181 aggctggctt catccactgc cccactgaga acgagccaga cttggcccttgc tggcccttgc  
 3241 gcttcaagga gctggaaaggc tgggagccag atgacgaccc catgttgc ttccttggcc  
 3301 agcctcgatg ggctttttt tgaacttgatg tgcgttgc ttttgc ttttgc  
 3361 agtatggag ggttgccttc cacccttattt gttttttttt cttttttttt cttttttttt  
 3421 ctcttataat gctgggttgc tgggtatgt tacaacctaa tttttttttt tttttttttt  
 3481 atgccttggg gtggacgttgc gatgccttgc gcttttgc tttttttttt tttttttttt  
 3541 gaccccttgc tttttttttt tttttttttt tttttttttt tttttttttt  
 3601 acatgtttat tggaaatataa cttttttttt tttttttttt tttttttttt tttttttttt  
 3661 cacacttttcg gaggcttgc gggccggatc accttgcaggc aggaggccaa gaccttgc  
 3721 gccaacttgg cggggcccttgc tttttttttt tttttttttt tttttttttt tttttttttt  
 3781 cacggcccttgc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 3841 gcccggcccttgc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 3901 actccgttgc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 3961 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4021 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4081 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4141 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4201 gttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4261 atgttgc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4321 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4381 agaaaatgttgc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4441 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4501 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4561 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4621 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4681 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4741 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4801 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4861 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4921 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt  
 4981 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt

Figure 10  
 (2 of 6)

**Figure 10**  
**(3 of 6)**

7741 ctggctcac tgccacccagg tcaagcgat tctcgccct caggcccc  
7801 agtagctgat attatagggt tgccacca gcccagcta acttttgtat tttagtaga  
7861 gacagggtt tgccatgtg gctaagctgg tctcgaaatc ctggcccaa gtgatctgcc  
7921 cgccctggca tccaaatgtg ctgggattac aggtgtgaac caccacacct ggccctcaata  
7981 tagtggctt taatgtctaa ggactgagat tggtttgt caggaagagg ccagttgtgg  
8041 gtgaaggcatg ctgtgagaga gcttgcacc tgggtgaggt tggggagct gcagcgtggg  
8101 aactggaaag tgggctgggg atcatcttt tccaggtcag gggcagccaa gctttctgc  
8161 agcgccat agaccatctc ttggccctcg tgggtcagag tctctgtgc atattgtctt  
8221 ttgttggttt tcacaaccc tttagaaacat aaaaagcatt cttagcccgt gggctggaca  
8281 aaaaaggcc atgacgggt gtatggattt gcccagcag gcccgtt gccaagccct  
8341 gtttagaca aggagcagct tggtgcctg gaaccatcat gggcacagg gaggagcaga  
8401 gtggatgtgg aggtgtgagc tggaaaccag gtcccagagc gctgagaaag acagagggtt  
8461 ttggcccttg caatgtgagc aactgaaatc tgacaccatc cagttccaga aagccctgaa  
8521 gtgtgggggg acgctgcggg gtgcctccgt ctgggttac agggatgtaa accccgtt tactaaaaat  
8581 gttagggggag tccactcacc tggtaagaat tggatgtaaaatggatgtacccggcc  
8641 gggcatggtg gctcacccctt gtaatccctg cactttgggaa ggccgaggcg ggtggatcac  
8701 gaggtcagga gatcgagacc atccgttca acatgttggaa accccgtt tactaaaaat  
8761 aaaaaaaaaat agctggcgtt ggtggcggggc gctgtatgc ccagctactc gggaggctga  
8821 ggcaggagaa tggcgtgaac ctggggatgtt gagttgtct tgagccgaga tcgcgccact  
8881 gcactccagc ctggccgaca gagcgagact ccgttcaaa aaaaaaaaaa aaagtggct  
8941 ttcatgtatgt gtgagctgaa ggcgcagtag gcagaagtag aggcctcgtt ccctgcagga  
9001 gaccctcgg tctctatctc ctgatgtca gaccctgcca cactggaaag agggagaca  
9061 ttacagccctg cgagaaaaat agggagattt aaaaactgtt tggctttat ttgaactgt  
9121 tttttttttt tggatgtttt ccccaattca gaatacagaa tactttatg gattttttt  
9181 tattacttta attttgaaac aatataatct tttttttttt gtttttttga gacagggct  
9241 tactctgtca cccaggctga gtgcagtgggt gtgtatctgg ctacccctcgtt cctcgacccc  
9301 ctggctcaa atgattctcc cacccatgtt tcccaagtag ctgggaccac aggtgcgtgt  
9361 gttgcgttat acaaattctg aagacaagga tgcgttgcgtt ggtgtatgtt gggattccca  
9421 agatcccaga ttgtatggca ggtatccctt gtctgttgc ttggcagggtt gccaggagg  
9481 cgctgtgtt gaagctgagg cccggccatc cagggcgatc cattggcgc tggatctgt  
9541 tcctgcgtgtt gcctcggtgc ttgtatgtt aaacaatgaa ataaatttga accagtgtga  
9601 aaatcgatca gggataaaat ttatgttggaa aataaaactga acaacttagt tcttcataag  
9661 agtttacatgtt gtaaataactt gtgtatgttgg cttttttttt ctttttttttggggatgtt  
9721 tttttttttt tttttttttt tttttttttt tttttttttt ttttttttttggggatgtt  
9781 ctcaggctgg agtacagtgg cacaatcaca gtcactata gcctcgaccc cctggactca  
9841 agcaatccctc ctgcctcagc ctccctgtt ctgggactac aggcgcgtt caccatgcct  
9901 ggcttaatttt aaattttttt tttttttttt tttttttttt ttttttttttggggatgtt  
9961 gctggagtgc agtggcgtga tctggctga cggcaagctc cgcctccctt gtttactcca  
10021 tcgcctgccc tccatccccc aatgtatgtt gactacaggc gctgggatgtt cttttttttt  
10081 cccaaatgtc tgggattaca ggctgtggcc actgcacccgg gcctgttttgc tttttttttt  
10141 gcaagatgtt tttttttttt tttttttttt tttttttttt ttttttttttggggatgtt  
10201 tgaccctccac attggggatgtt tttttttttt tttttttttt ttttttttttggggatgtt  
10261 aggtttttttt gaaagagaag aaactgaata atccatgtgtt gtatataat ttttttttttggggatgtt  
10321 atggtcatct tttccatataca gtaaagctga ggctccctgg gactgcagag ttttttttttggggatgtt  
10381 cagtccatata taatgtgtgtt gtttttttttggggatgtt ttttttttttggggatgtt

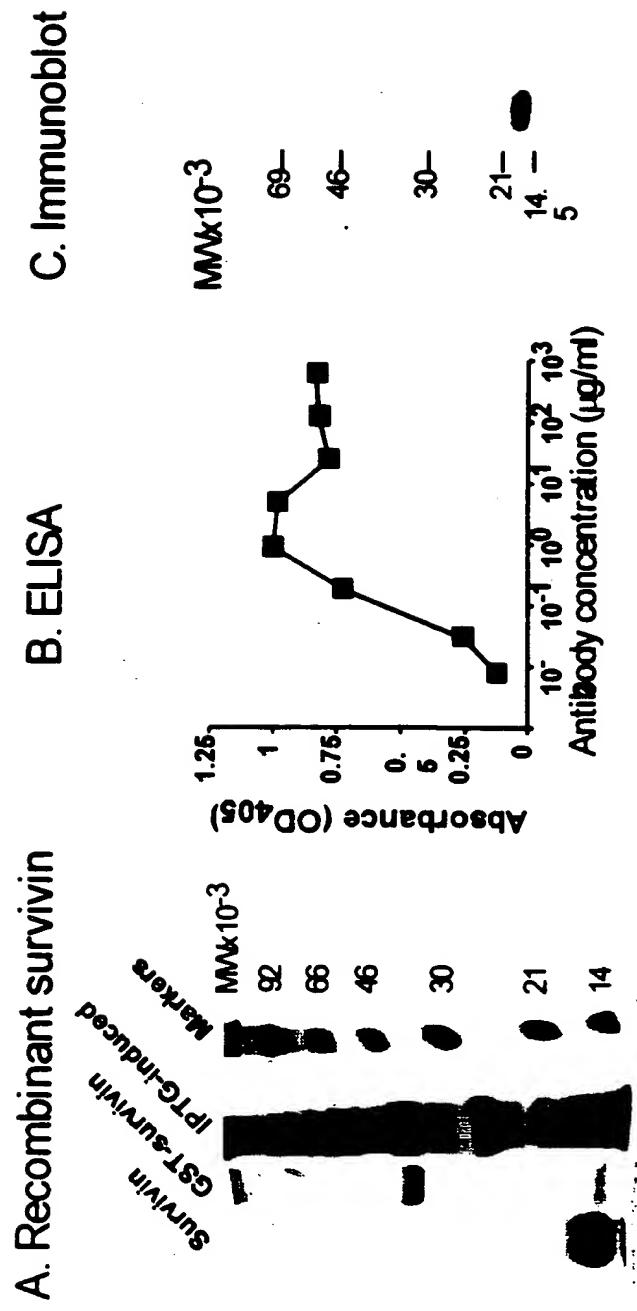
Figure 10  
(4 of 6)

**Figure 10**  
**(5 of 6)**

13141 gaggctatct cggctgtcc tgagaaaataa aaaggctgtc attcaaaaca ctgctgtgga  
13201 ccctactggg tttttaaaat attgtcagt tttcatcgic gtccctagcc tgccaaacgc  
13261 catctgcccc gacagccgca gtgaggatga gctgtgttggc agagacgcag ttgtctctgg  
13321 gcgcttgcca gagccacgaa cccagaccc ttttgtatca tccgggtcc ttccgggcag  
13381 aaacaactga aaatgcactt cagacccact tattatgcc acatctgagt cggcctgaga  
13441 tagacttttc cctctaaact gggagaatat cacagtggtt ttgttagca gaaaatgcac  
13501 tccagccctt gtactcatct aagctgttta ttttgtat tttgtgtcgt ctgtaaaatgg  
13561 atacttcact ttaataactg ttgttagta attggctttg tagagaagct gaaaaaaaat  
13621 gttttgtct tcaactccct tgcatgcccag gcgggtatgt ggatctcgcc ttgtgtgagc  
13681 ctgtgtgt ggcagggtg agctggagcc gcccctctca gcccgcctgc cacggccctt  
13741 ctttaaggc catcttaaaa accagaccc catggctgcc agcacctgaa agcttctcg  
13801 acatctgtta ataaagccgt agggccctgt ctaagcgcaa ccgcctagac ttcttttcag  
13861 atacatgtcc acatgtccat ttttcaggtt ctctaaatgt gagggtggatc tgggaagggt  
13921 tgtgaatgag gtttctggc tatgggttag gttccaatgg cagggttagag cccctcgcc  
13981 caactgcccatttcaag cttggaaatgt agagacagca gtgcccgtg cccagaagag accagcaagc  
14041 caaaactggag ccccccattgc aggctgtcgc catgtggaaa gagtaactca caattgccaa  
14101 taaaatgttca tttttttttt tttttttttt tttttttttt gagacaaggc  
14161 ctggccctcc caggctggag tgcagtggaa tgaccacagc tcaccgcac ctcaaaatct  
14221 tgcgttcaag tgaacctccc actttagct cccaaatgtc tgggactaca ggccgcacgccc  
14281 atcacaccccg gctaattgaa aaattttttt tttttttttt taggaatctc acttttgtc  
14341 ccaggctgtt ctcaaaatcc tgggctcaag tgatcatccct gtttcagcgtt ccgacttgtt  
14401 ggtattatag gctgtgagcca ctggccctga cctagctacc atttttttaat gcagaaaatga  
14461 agacttgttag aaatgaaata acttgtccag gatagtcgaa taagtaact ttagagctgg  
14521 gatttgaacc caggcaatct ggctccagag ctggcccttc actgctgttgg gacactgtca  
14581 gttttggagg gtggctatgg tggctgtct gattcttaggg agtggaggct gtctttaaag  
14641 cccccatccat ttttcaaga cagctttgtc agaaaggctg tcatatggag ctgacacactg  
14701 ctcccccaag gcttccatag atccctctgt tacattgtaa cttttttttt tgaaaatgaaa  
14761 attcacagga agttgttagg ctgtacagg ggatcc (SER ID NO: 35)

**Figure 10**  
**(6 of 6)**

**Figure 11** Expression of survivin and generation and characterization of anti-survivin mAb 8E2 by ELISA and immunoblotting.



**Figure 12** Site-directed mutagenesis of survivin and identification of key functional residues involved in apoptosis inhibition.

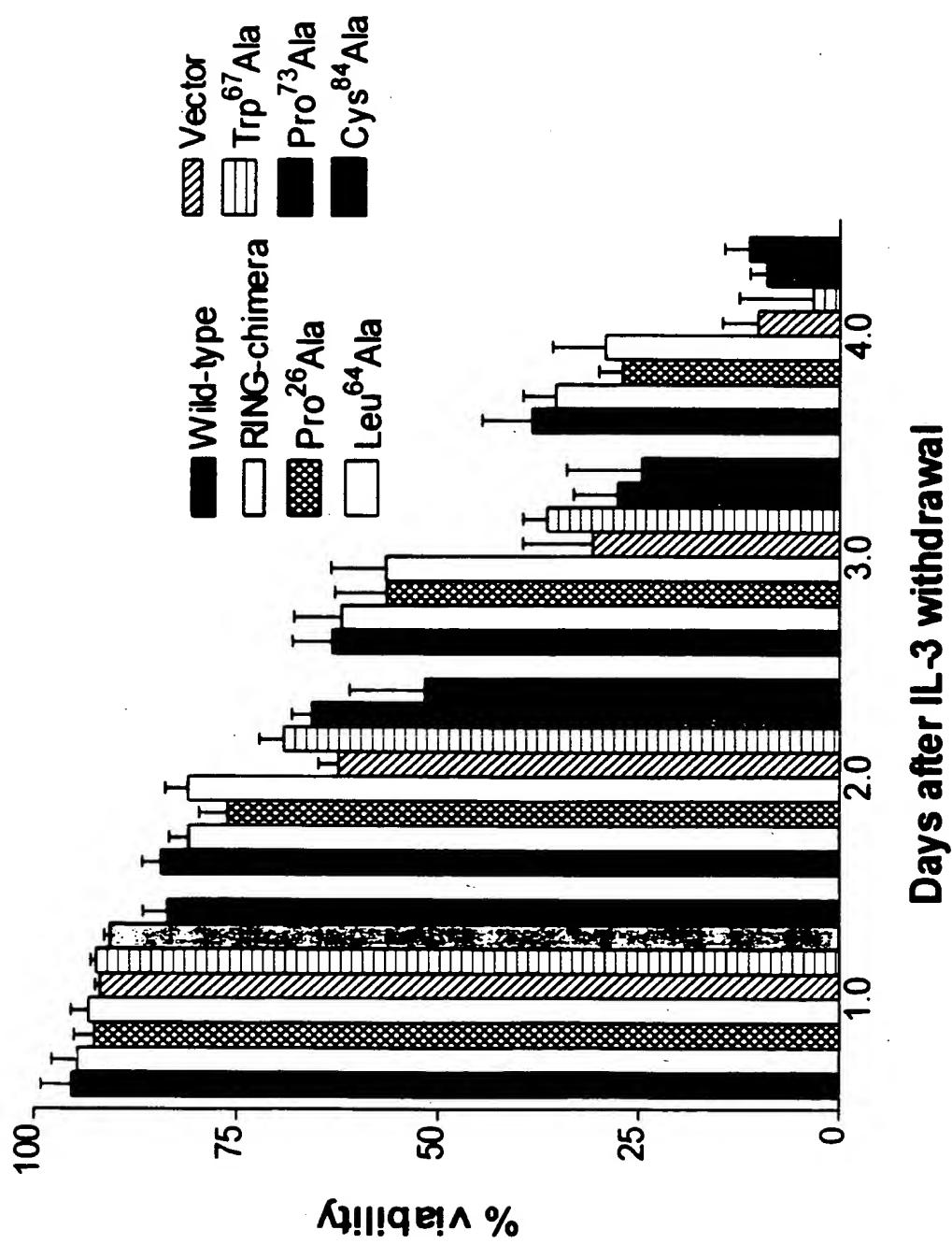
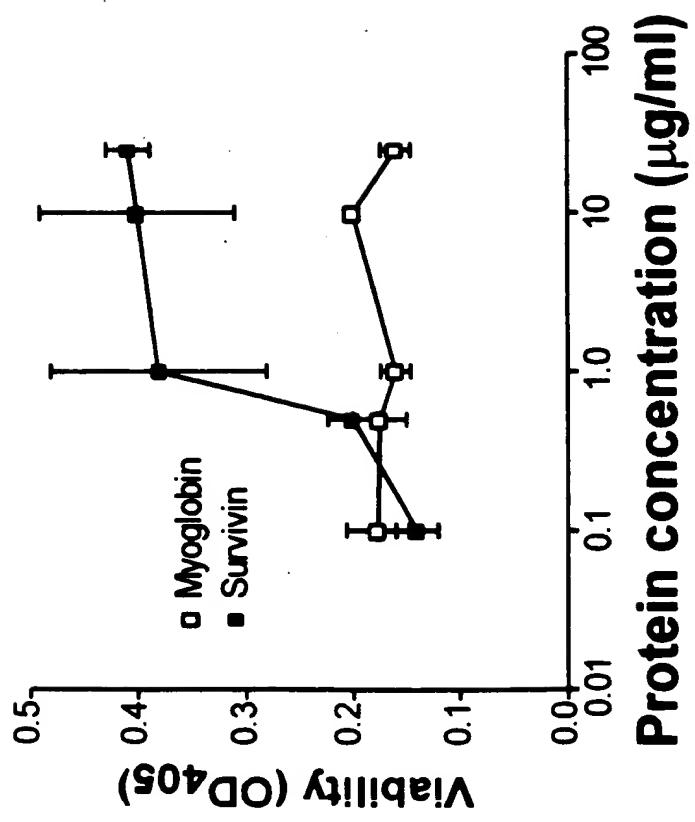
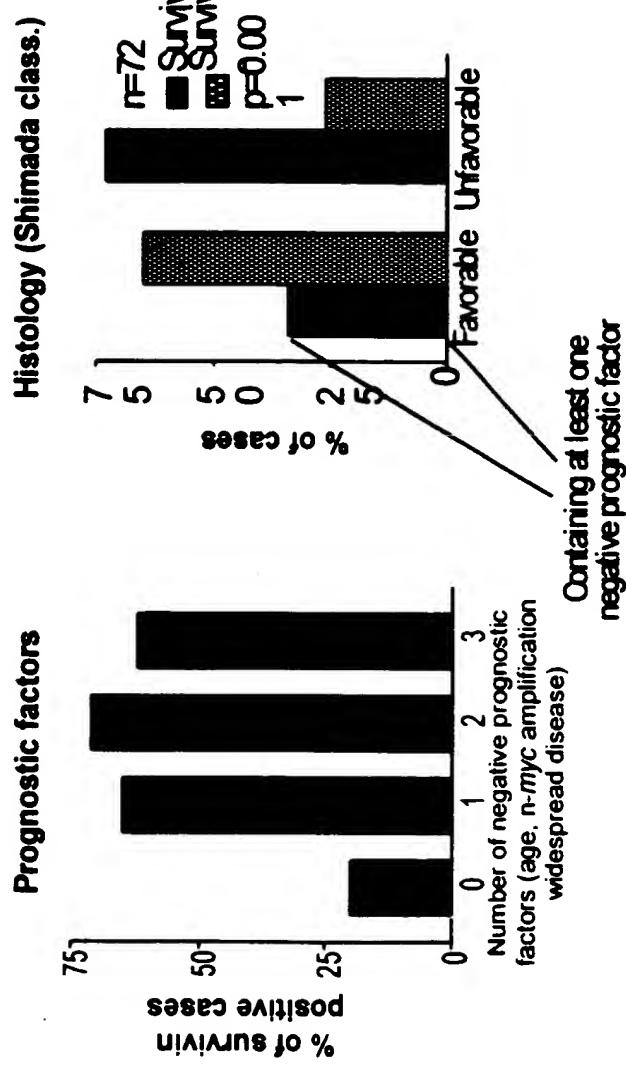


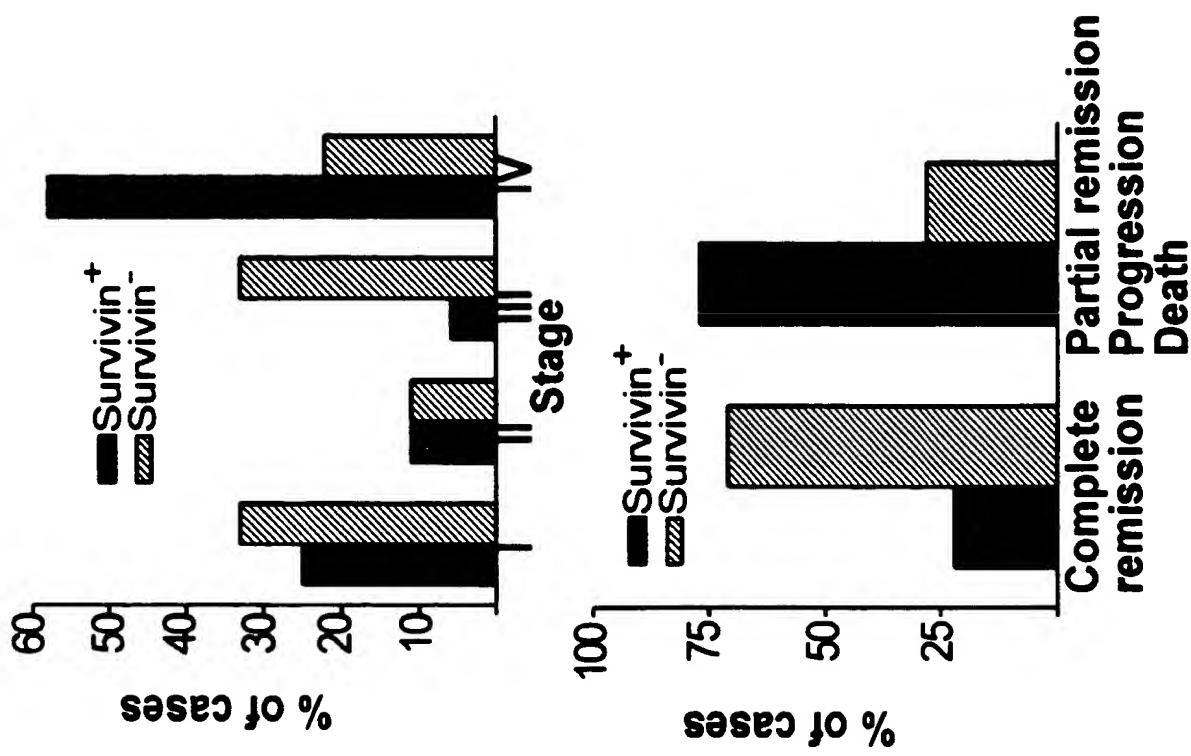
Figure 13 Cytoprotective effect of survivin addition on endothelial cell apoptosis.

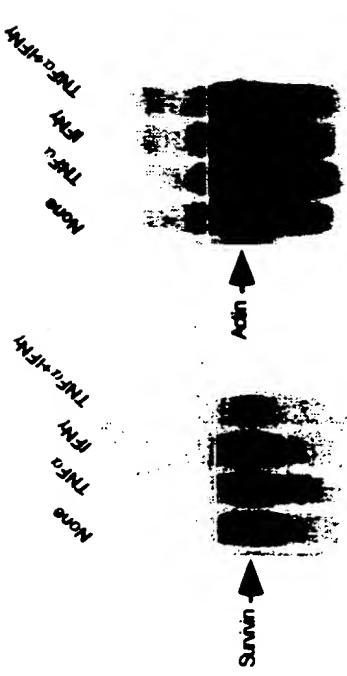


**Figure 14** Survivin as a negative predictive-prognostic factor in neuroblastoma



**Figure 15** Survivin as a negative predictive prognostic factor in high-grade non-Hodgkin's lymphoma.





**Figure 16** Down-regulation of survivin induced by inflammatory and cytostatic cytokines IFN $\gamma$  plus TNF $\alpha$  but not by either cytokine alone.

Figure 17

**Effect of survivin constructs or XIAP on apoptosis induced in NIH3T3 cells by hydrogen peroxide**

